

# THE MINERAL INDUSTRY OF MAURITANIA

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Iron ore mining and beneficiation was the dominant mineral industry in Mauritania and has accounted for approximately one-third to one-half of export earnings since the mid-1980's. Gold recovery from the Akjoujt copper mine tailings was drawn to a close in early 1996 as the tailings stockpile was depleted. Cement and salt also were produced. The nation's sole petroleum refinery, operating on imported crude oil, supplied about one-half of the country's petroleum product requirements. Mining accounted for more than 12% of the gross domestic product (Afrafa, 1997). The Ministry of Mines and Industry's Office of Geological Research continued several exploration programs during 1996. Principal activities were focused on gold exploration in the Tassia, Tijirit, and Inchiri regions.

Production of the nation's foremost mineral commodity, iron ore, improved with the opening of the M'Haoudat Mine in 1994 which for the most part provided direct shipping ores averaging 65% iron content. (See table 1.) Salt is recovered from coastal areas near Nouakchott. Production, however, does not meet the heavy requirements of the fish processing industry.

Mauritania's iron ore shipments totaled nearly 11.16 million metric tons (Mt) in 1996, a 3.1% reduction from that of 1995. About 8.9 Mt were exported as fines and the remainder as lump ore. Most exports, or 10.8 Mt, were delivered to the steel mills of the European Union with Italy as the leading destination. Iron ore accounted for 40% of total exports in 1996. Other mineral exports were possibly small quantities of gold and plaster products.

Petroleum product imports were approximately 1.5 million barrels in 1996, accounting for almost one-half of consumption; the remainder was supplied from the refining of imported crude oil. Other mineral industry imports included about 125,000 metric tons per year (t/yr) of aluminum and copper semimanufactures, 3,000 t/yr of sulfuric acid, 2,000 t/yr of phosphate fertilizer, and about 12,000 t/yr of salt.

Ashton Africa Ltd. of Australia obtained several permits in the Tassia and R'Gueibat shield for diamond exploration. Although commercially promising phosphate rock deposits have been discovered in remote regions of southern Mauritania, lack of essential infrastructure continues to hamper their development.

Australia's General Gold Resources NL was awarded an exploration license covering an additional 3,000 square kilometers (km<sup>2</sup>) in the Tassia-Tijirit region north of Akjoujt bringing the company's total area under exploration licenses for copper-gold-cobalt resources to 23,000 km<sup>2</sup>. General Gold Resources NL is also developing the Guelb Moghrein copper mines in partnership with Société Arab des Mines de l'Inchiri

(SAMIN). A feasibility study by Kilborn and Lavalin of Canada reports a minable reserve of 22 Mt averaging 1.8% copper. Extraction of the near-surface-oxide ore is to commence in 1998 and continue for a projected 13-year mine life. Total output from the mine is expected to be 325,000 metric tons of copper; 26,000 kilograms of gold; and 2,600 metric tons of cobalt in hydroxide powder form (General Gold Resources, 1997).

Iron ore mining operations were conducted by Société Nationale Industrielle et Minière (SNIM) in northwestern Mauritania. More than one-half of the production is derived from the M'Haoudat deposit, 60 kilometers (km) northeast of Zouirat.

The Alexandria National Iron & Steel Co. and the Holding Co. for Metallurgical Industries, of Egypt, along with Enterprise Nationale de Siderurgie and Ferphos, of Algeria, have joined SNIM in signing a protocol agreement on the construction of an iron ore pelletizing plant to satisfy demands of direct-reduction plants in the region. The plant's capacity was planned at 5 million metric tons per year (Mt/yr) of iron ore pellets upgraded to a 68% iron content. The project involves mining and beneficiation at Ayouj, 30 km north of F'Derik and 650 km from the Port of Nouadhibou.

In September 1996, a 42,645 km<sup>2</sup> hydrocarbon exploration permit was awarded to Hardman Resources of Australia. This was the first active hydrocarbon exploration program since 1993.

Mauritania's sole petroleum refinery, Nouadhibou, was owned by the Société Mauritanienne d'Industrie de Raffinage and operated under the technical management of Algeria's Naftal. The 20,000-barrel-per-day capacity refinery, operating on imported crude oil, supplied more than one-half of Mauritania's petroleum product requirements.

Iron ore reserves, according to SNIM are 155 Mt of hematite ore ranging from 60% to 68% iron and 531 Mt of magnetite ore ranging from 36% to 40% iron (Société Nationale Industrielle et Minière, 1997). In addition to these proven reserves, probable iron ore reserves in the western Guelbs amount to 980 Mt of low grade ores.

A major barrier toward investment and development was the nation's limited infrastructure, which renders all but the largest deposits uneconomic. There were four paved roads in Mauritania: from the port of Nouakchott to the copper deposits at Akjoujt in the north, from Nouakchott to Nema in the east, from Nouakchott to Rosso in the south, and from Boghe to Kaedi on the southern border. The sole railroad in Mauritania was owned and operated by SNIM for the transport of iron ore

from the mines to the export terminal. The 1.435-meter standard-gauge railroad extends more than 700 km from M'Haoudat to the port at Nouadhibo.

Existing and proposed mining operations suggest an improved outlook for the nation's economy. Increased production, however, is largely dependent on world iron ore prices. Factors bearing on the availability of financial support for the mineral economy include the border disputes between the Governments of Senegal and Mauritania, the nation's heavy external debt burden, and significant fiscal balance-of-payments deficits.

Mauritania, assisted by the World Bank, was preparing to overhaul its mining sector policies to attract more foreign investment with the objective of diversifying the economic base and increasing employment while strengthening the technical skills of the labor force. The Ministry of Mines and Industry was revising the mining code and reinforcing and restructuring the state institutions involved in mining and geology. The mining code revision was scheduled to be part of a major reform of the Nation's judicial and regulatory systems slated for completion by 1997.

## References Cited

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- General Gold Resources, 1997, Quarterly report—1997: West Perth, Australia, p. 1.
- Société Nationale Industrielle et Minière 1997: Mauritania, Nouakchott, Mauritania, Société Nationale Industrielle et Minière 4 p.

## Major Sources of Information

- Mauritanian Office for Geological Research (OMRG)  
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Telephone: [222] (2) 514-10
- Ministry of Mines and Geology  
B.P. 199  
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- Société Nationale Industrielle et Minière (SNIM)  
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TABLE 1  
MAURITANIA: PRODUCTION OF MINERAL COMMODITIES 1/

Commodity 2/		1992	1993	1994	1995 e/	1996 e/
Cement	metric tons	122,000	111,000	374,000	375,000	375,000
Gold	kilograms	826	1,264	1,738	1,196 r/	200
Gypsum	metric tons	3,300	3,240	4,230	5,810 r/	9,300
Iron and steel: Iron ore:						
Gross weight	thousand metric tons	8,835	9,360	11,400	11,610 r/	11,360
Iron content e/	do.	5,330	5,700	7,000	7,000	7,000
Petroleum refinery products:						
Liquefied petroleum gas	thousand 42-gallon barrels	441	418	415 e/	415	415
Gasoline	do.	1,912	1,938	1,925 e/	1,925	1,925
Kerosene	do.	448	471	470 e/	470	470
Distillate fuel oil	do.	1,129	1,099	1,100 e/	1,100	1,100
Residual fuel oil	do.	2,344	2,357	2,355 e/	2,355	2,355
Other	do.	636	635	640 e/	640	640
Total	do.	6,910	6,918	6,905 e/	6,905	6,905
Salt e/	metric tons	5,500	5,500	5,500	5,500	5,500

e/ Estimated. r/ Revised.

1/ Table includes data available through Sept. 1, 1997.

2/ In addition to the commodities listed, modest quantities of crude construction materials (clays, sand and gravel, and stone) presumably were produced, but output was not reported quantitatively, and available information was inadequate to make reliable estimates of output levels.